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(19)(CA) **APPLICATION FOR CANADIAN PATENT** (12)

(54) Free Flowing Concentrate of Pearlescence Imparting Agents

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FREE FLOWING CONCENTRATE OF PEARLESCENCE IMPARTING AGENTS

Field of the Invention

This invention relates to a concentrate in the form of a free-flowing or pumpable, aqueous dispersion containing 15 to 40% by weight of pearlescence imparting (pearlescing) components.

Statement of Related Art

Aqueous compositions of surfactants and cosmetic compositions can be given a pearlescent, aesthetically attractive appearance by incorporation of substances which, after cooling, precipitate in the form of fine nacreous crystals and remain dispersed in the compositions. Suitable among these pearlescence imparting agents or pearlescers are, for example, the monoesters and diesters of ethylene glycol, propylene glycol, and oligomeric alkylene glycols of this type, or of glycerol, with C_{16-22} fatty acids; fatty acids themselves; and monoalkanolamides of fatty acids with C_2 or C_3 alkanolamines. (In this description, unless the context requires otherwise, the term "fatty" when applied to a chemical name such as acid or alcohol means that the chemical includes a hydrocarbon moiety with a straight chain of at least six carbon atoms and that at least one of the principal functional group such as carboxyl or hydroxyl is at one end of such a carbon chain.)

It is known that the pearlescers mentioned can form stable dispersions in water or in aqueous surfactant solutions and that the concentrated pearlescent dispersions obtained in this way can be added without heating to other compositions for which a pearlescent appearance is desired, so that pearlescence can be obtained in these compositions into which a pearlescent concentrate is incorporated without any need for repeating the heating and cooling

originally necessary to form the pearlescent crystals.

Pearlescent concentrates based on the pearlescers mentioned above are known, for example, from DE-A-16 69 152, from JP-56/71021 (Chem. Abstr. 95/156360), from DE-A-34 11 328 and DE-A-35 19 081. The pearlescent concentrates known from DE-A-16 69 152 contain anionic surfactants to stabilize the dispersion in its liquid state. However, the presence of ionic surfactants is undesirable in many applications of such pearlescent concentrates because incompatibility with formulation constituents of opposite ionicity can arise and can adversely affect the stability of the dispersion.

In addition, the pearlescent concentrates known from these publications contain fatty acid monoalkanolamides or dialkanolamides as part of the pearlescers. However, alkanolamines and derivatives thereof have recently been suspected of participating in the formation of nitrosamines, with the result that efforts are being made to avoid alkanolamines and alkanolamine derivatives in the formulation of cosmetic compositions.

However, omission of the fatty acid alkanolamides from the known pearlescent concentrates leads to a distinct reduction in the pearlescent properties. For example, it was proposed in applicants' German patent application 37 24 547.3 to use pearlescent concentrates containing substantially linear, saturated fatty acids as the pearlescing component. However, distinctly higher concentrations of such pearlescing components are required to obtain satisfactory pearlescence in the end product.

The pearlescent concentrates known from JP-56/71021 are attended by the disadvantage that they are not free-flowing and do not form stable, free-flowing dispersions upon dilution with water. This makes the concentrates very difficult to handle and process on an industrial scale.

Therefore, there is still a need for pearlescent concentrates having high concentrations of pearlescing components as stable as those in JP-56/71021 but which are

free-flowing, thus readily pumpable, and which may be incorporated into products to be given a pearlescent appearance, irrespective of the content of cationic or anionic components in the products. In addition, it should be possible, if desired, to formulate these concentrates without alkanolamides and to provide the end product with the desired pearlescence, even with lower concentrations of pearlescing components therein than are required for pearlescers according to German patent application 37 24 547.3.

Description of the Invention

It has now been found that all the requirements stated above are satisfied by a pearlescent concentrate in the form of a free-flowing, aqueous dispersion which is characterized by a content of

(A) 15 to 40% by weight of pearlescing components,

(B) 5 to 55% by weight of nonionic, ampholytic, and/or zwitterionic emulsifiers and

(C) 0.1 to 5% by weight of low molecular weight, polyhydric alcohols.

Particularly advantageous properties are exhibited by pearlescent concentrates containing

(A) 20 to 30% by weight of pearlescing components,

(B) 15 to 30% by weight of nonionic, ampholytic and/or zwitterionic emulsifiers, and

(C) 0.5 to 3% by weight of low molecular weight, polyhydric alcohols.

Pearlescing components are to be understood as nacreous forms of fusible fats or waxes which crystallize out in the form of fine, pearlescing substances upon cooling of their aqueous solutions or emulsions from a point above the melting point of the fusible fat or wax to a point below its solidification point in a temperature range of from about 30 to 90°C.

Preferred pearlescing components are

(A1) esters corresponding to formula (I):

$$R^1 - (OC_nH_{2n})_x - OR^2 \qquad (I),$$

in which R^1 represents a linear C_{14-22} fatty acyl group, R^2 represents hydrogen or a group from the same class as R^1, $n = 2$ or 3, and x is a number from 1 to 4;

(A2) monoalkanolamides corresponding to general formula (II):

$$R^3 - CO - NH - X \qquad (II),$$

in which R^3 represents an alkyl group containing 8 to 22 and, more preferably, 8 to 18 carbon atoms and X is $-CH_2-CH_2-OH$, $-CH_2-CH_2-CH_2-OH$, or $-C(CH_3)_2-OH$;

(A3) linear, saturated C_{16-22} fatty acids; and

(A4) β-ketosulfones corresponding to general formula (III):

$$R^4 - CO - \underset{\displaystyle R^5}{\underset{|}{CH}} - SO_2 - CH_2 - R^6 \qquad (III),$$

in which R^4 represents a C_{11-21} alkyl or alkenyl group, and either each of R^5 and R^6 represents a hydrogen atom or R^5 and R^6 together represent an ethylene group so that the moiety

$$\underset{\displaystyle R^5}{\underset{|}{CH}} - SO_2 - CH_2 - R^6$$

represents a tetrahydrothiophene dioxide derivative.

The pearlescent concentrates according to the invention may consist exclusively of one single chemical compound from any one of these classes, may be mixtures of representatives of only one of these classes of compounds, or may be mixtures of representatives of any two or more of these classes of compounds.

Suitable esters (A1) corresponding to the general formula $R^1(OC_nH_{2n})_xOR^2$ are, for example, the monoesters and diesters of ethylene glycol and propylene glycol with higher fatty acids, for example with palmitic acid, stearic acid or behenic acid, or the diesters of diethylene glycol or triethylene glycol with such fatty acids. Also suitable are mixtures of monoesters and diesters of the glycols mentioned with fatty acid mixtures, for example with hydrogenated tallow fatty acid or with the saturated C_{14-18} fatty acid fraction of tallow fatty acid. The ethylene

glycol monoester(s) and/or diester(s) of palmitic and/or stearic acids are particularly preferable.

Preferred monoalkanolamides (A2) are the monoethanolamides. These compounds may all contain the same alkyl radicals. However, it is more common commercially, and satisfactory for use in this invention, to produce the alkanolamides of fatty acid mixtures from natural sources, for example coconut oil fatty acids, so that corresponding mixtures are present in regard to the alkyl radicals, and alkanolamide mixtures derived from such mixtures are highly suitable for use in this invention.

Suitable linear fatty acids (A3) are, for example, palmitic acid, stearic acid, arachic acid, or behenic acid, although it is also possible to use technical fatty acid cuts consisting entirely or predominantly of C_{16-22} fatty acids, for example palmitic/stearic acid fractions of the type obtained from tallow fatty acid by separation of the fatty acids liquid at +5°C or palmitic/stearic acid fractions of the type obtainable by hydrogenation of tallow fatty acid.

The β-ketosulfones (A4) of general formula (III) have the advantage over the known ethylene glycol monoesters and diesters that the pearlescence of the compositions shows higher heat stability, i.e. the compositions retain their pearlescence for several hours on heating to temperatures above 50°C and, in some cases, to temperatures above 70°C. Further information on the β-ketosulfones mentioned can be found in German patent application 35 08 051.

According to the invention, it is preferred to use the highly pearlescing compounds of classes (A1) and (A2).

Pearlescent concentrates in which at least 70% by weight and more especially at least 90% by weight of the pearlescing components consist of ethylene glycol distearate are particularly preferred.

Suitable emulsifiers (B) are nonionic, ampholytic and/or zwitterionic surface-active compounds characterized by a lipophilic, preferably linear, alkyl or alkenyl group

and at least one hydrophilic group. The hydrophilic group may be either an ionic group or a nonionic group.

Nonionic emulsifiers contain, for example, a polyol group, a polyalkylene glycol ether group or a combination of a polyol group and a polyglycol ether group as the hydrophilic group.

Preferred pearlescent concentrates are those which contain as emulsifiers nonionic surfactants from the group consisting of

(B1) adducts of an average of from 2 to 30 moles of ethylene oxide and/or an average of 0 to 5 moles of propylene oxide with each mole of linear C_{8-22} fatty alcohols, C_{12-22} fatty acids, and/or with alkyl phenols containing 8 to 15 carbon atoms in the alkyl group, the total moles of ethylene oxide and propylene oxide combined averaging not less than two per mole of lipophilic group containing alcohol, acid, or alkyl phenol;

(B2) C_{12-18} fatty acid monoesters and diesters of adducts of an average of from 1 to 30 moles of ethylene oxide with each mole of glycerol;

(B3) glycerol monoesters and diesters and sorbitan monoesters and diesters of saturated and unsaturated C_{8-18} fatty acids and of acids that are adducts of from 1 to 30 moles of ethylene oxide with each mole of saturated and unsaturated C_{8-18} fatty acids;

(B4) C_{8-18} alkyl mono- and oligo-glycosides and oligo(oxyethylene) homologs thereof; and

(B5) adducts of an average of from 10 to 60 moles of ethylene oxide with each mole of castor oil and/or hydrogenated castor oil.

Individual compounds or mixtures of compounds from any of these classes are suitable for use in the invention.

The adducts of ethylene oxide and/or propylene oxide with fatty alcohols, fatty acids, alkyl phenols, glycerol monoesters and diesters and sorbitan monoesters and diesters of fatty acids or with castor oil are known commer-

cially available products. They are homolog mixtures of which the average degree of alkoxylation corresponds to the ratio between the quantities of ethylene oxide and/or propylene oxide and substrate with which the addition reaction is carried out.

C_{12-18} fatty acid monoesters and diesters of adducts of ethylene oxide with glycerol are known from DE-PS 20 24 051 as oil-restoring agents for cosmetic compositions. C_{8-18} mono- and oligo-glycosides, their production and their use as surfactants are known, for example, from US-A 3,839,318, US-A 3,707,535, US-A 3,547,828, DE-A 19 43 689, DE-A 20 36 472 and DE-A 30 01 064 and from EP-A 77 167. They may be prepared in particular by reaction of glucose or oligosaccharides with primary C_{8-18} alcohols. So far as the glycoside residue is concerned, both monoglycosides, in which a cyclic sugar residue is attached to the fatty alcohol by a glycoside bond, and also oligomeric glycosides having a degree of oligomerization of up to, preferably, 8 are suitable. The degree of oligomerization is a statistical mean value on which a homolog distribution typical of such technical products is based.

The compounds of group (B1) are particularly preferred nonionic emulsifiers (B) for the purposes of the invention.

Zwitterionic surfactants may also be used as the emulsifiers (B). Zwitterionic surfactants are surface-active compounds which contain at least one quaternary ammonium group and at least one $-COO^-$ or $-SO_3^-$ group in the molecule. Particularly suitable zwitterionic surfactants are the so-called betaines, such as the N-alkyl-N,N'-dimethyl ammonium glycinates, for example coconut alkyl dimethyl ammonium glycinate, N-acylaminopropyl-N,N-dimethyl ammonium glycinates, for example coconut acylaminopropyl dimethyl ammonium glycinate, and 2-alkyl-3-carboxymethyl-3-hydroxyethyl imidazolines containing 8 to 18 carbon atoms in the alkyl or acyl group and also coconut acylaminoethyl hydroxyethyl carboxymethyl glycinate. The fatty acid amide derivative known by the CTFA Directory ("CTFA") name of

cocoamidopropyl betaine is particularly preferred. (The CTFA Directory is published by the Cosmetics, Toiletries, and Fragrances Association, Washington, DC, U.S.A.)

Other suitable emulsifiers (B) are ampholytic surfactants. Ampholytic surfactants are surface-active compounds which, in addition to a C_{8-18} alkyl or acyl group in the molecule, contain at least one free amino group and at least one -COOH or $-SO_3H$ group. They are capable of forming inner salts. Examples of suitable ampholytic surfactants are N-alkyl glycines, N-alkylpropionic acids, N-alkylaminobutyric acids, N-alkyliminodipropionic acids, N-hydroxyethyl-N-alkylamidopropyl glycines, N-alkyltaurines, N-alkylsarcosines, 2-alkylaminopropionic acids, and alkylaminoacetic acids containing approximately 8 to 18 carbon atoms in the alkyl group. Particularly preferred ampholytic surfactants are N-coconut alkylaminopropionate, coconut acylaminoethylamine propionate, and C_{12-18} acyl sarcosine.

According to the invention, the pearlescent concentrates may contain representatives of one or more of the above-mentioned classes of surfactants. Where mixtures are used, it is preferred to use nonionic and zwitterionic and/or ampholytic surfactants in a ratio by weight of 5:1 to 1:5.

Pearlescent concentrates according to the invention, which contain as surfactants only nonionic, zwitterionic, and/or ampholytic types, have proved to be particularly universally usable and to be particularly compatible with aqueous compositions of water-soluble surfactants of any type and any ionicity and thus are particularly preferred.

If desired, however, the pearlescent concentrates may also contain anionic or cationic emulsifiers.

Suitable anionic emulsifiers are, for example, alkyl sulfates and alkyl polyethylene glycol ether sulfates containing 1 to 6 ethylene glycol ether groups in the molecule, which are used in the form of their alkali metal, magnesium, ammonium, mono-, di- or tri-alkanolammonium salts containing 2 to 3 carbon atoms in the alkanol group.

Other suitable anionic surfactants are alkanesulfonates, α-olefin sulfonates, α-sulfofatty acid methyl esters, fatty alcohol (polyglycol ether) carboxylates, sulfosuccinic acid mono- and di-alkyl esters, sulfosuccinic acid ester salts, acyl isethionates, acyl taurides, and acyl sarcosides. Soaps may also be used as emulsifiers. This may be achieved, for example, by saponifying a small proportion, for example 1 to 20% by weight, of linear, saturated fatty acids by added alkali hydroxide and thus converting them into an anionic emulsifier. Preferred anionic surfactants are the alkyl polyethylene glycol ether sulfates such as, for example, sodium lauryl polyglycol ether sulfate.

Suitable cationic emulsifiers are quaternary ammonium surfactants, for example alkyl trimethyl ammonium chlorides and dialkyl dimethyl ammonium chlorides, for example cetyl trimethyl ammonium chloride, stearyl trimethyl ammonium chloride, distearyl dimethyl ammonium chloride, lauryl dimethyl ammonium chloride, lauryl dimethyl benzyl ammonium chloride, cetyl pyridinium chloride, and tallow alkyl tris-(oligooxyalkyl)-ammonium phosphate.

The alkyl groups in the anionic and cationic surfactants mentioned typically contain 8 to 22 and more preferably 12 to 18 carbon atoms.

The molecules containing alkyl groups used as surfactants may be those of a single chemical compound. However, it is generally preferred to use natural vegetable and animal starting materials in the production of these compounds, so that mixtures having different alkyl chain lengths depending on the particular starting material used are obtained.

A content of low molecular weight polyhydric alcohols is crucial to the flowability or pumpability of the pearlescent concentrates according to the invention. Preferred low molecular weight polyhydric alcohols contain 2 to 6 carbon atoms and 2 to 6 hydroxyl groups. Alcohols such as these are, for example, ethylene glycol, 1,2- and 1,3-propylene glycol, glycerol, di- and triethylene glycol,

erythritol, arabitol, adonitol, xylitol, sorbitol, mannitol, and galactitol. It is particularly preferred to use compounds which are liquid at room temperature, most preferably 1,2-propylene glycol and/or glycerol.

In the case of pearlescent concentrates containing less than about 30% by weight pearlescing components, a content of low molecular weight polyhydric alcohols of approximately 1% by weight has proved to be sufficient in many cases. This applies particularly when 1,2-propylene glycol and/or glycerol is used as the alcohol component.

In addition to the components mentioned above, the pearlescent concentrates according to the invention must contain water. Commercially available preservatives may be added in small quantities to protect the concentrates against bacterial and fungal attack. In addition, the concentrates may contain small quantities of buffers, for example citric acid and/or sodium citrate, to stabilize and adjust the pH to values in the range from 2 to 8.

The pearlescent concentrates according to the invention are usually and preferably pumpable at least over a temperature range of 5 to 40° C and remain stable in storage for prolonged periods, i.e. for at least about 3 months.

The pearlescent concentrates according to the invention are preferably prepared by initially heating components (A), (B) and (C) together to a temperature approximately 1 to 30° C above the melting point. In most cases, this will be a temperature in the range from about 60 to 90° C. Water heated to substantially the same temperature is then added to this mixture. Where an ionic water-soluble surfactant is used as the emulsifier, it may be preferred to dissolve it in the aqueous phase and to introduce it together with the water into the mixture. The aqueous phase may also contain any buffer substances desired in dissolved form. The dispersion formed is then cooled with continuous stirring to room temperature, i.e. to around 25°C. In most cases, the viscosity of the

pearlescent concentrate is so low that there is no need to use special stirring units, such as homogenizers or other high-speed mixers. Any temperature-sensitive preservatives should be added only after cooling to temperatures below 40° C and preferably only just before the end of the cooling period at a temperature of the order of 30° C.

The pearlescent concentrates according to the invention are suitable for the production of opaque-to-translucent and pearlescent, liquid aqueous compositions of water-soluble surfactants. They may be incorporated, for example, into liquid detergents, such as dish washing detergents, liquid light-duty detergents and liquid soaps, but are preferably incorporated in liquid personal hygiene and body-care compositions, such as for example shampoos, liquid hand and body soaps, shower bath compositions, bath additives (foam baths), hair rinses, and hair dyes.

To produce pearlescence, the pearlescent concentrates according to the invention are generally added to clear aqueous compositions at 0 to 40° C in a quantity of 1 to 10 % by weight and more preferably in a quantity of 1.5 to 5 % by weight of the composition and are dispersed therein with stirring. A dense and metallically lustrous to slightly lustrous and extremely dense pearlescence can be obtained, depending on the composition and the concentration used.

The following Examples are intended to illustrate the invention without limiting it in any way.

Examples

Free-flowing pearlescent concentrates having the compositions shown in Table 1 were prepared. The percentages by weight shown in Table 1 are for the active ingredients, even when solutions of the active ingredients were actually used to make the compositions shown, as indicated in the explanations given in footnotes for the ingredients identified in the main part of the Table by

Table 1: Free-flowing pearlescent concentrates

Mixture Number:	1	2	3	4	5	6	7	8	9	10	11	12
Component	Content (% by weight)											
Pearlescer (A) total	25	25	25	30	30	30	25	25	25	25	25	25
including Cutina® AGS[1]	25	25	25	30	30	25	25	25	25	25	25	25
Comperlan® 100[2]	-	-	-	-	-	5	-	-	-	-	-	-
Emulsifier (B) total	19	17	19	20.5	20.5	20.5	17	18	17	17	19	18.5
including Dehydol® LS4[3]	5	11	5	13	13	13	11	8	11	11	5	11
Dehyton® K[4]	9	6	9	7.5	7.5	7.5	6	6	6	6	9	7.5
Dehydol® LS3[5]	5	-	5	-	-	-	-	4	-	-	5	-
Alcohol (C) total	1	5	1	5	5	5	5	1	1	1	1	5
including glycerol[6]	-	5	1	5	-	5	-	-	1	-	1	3
1,2-propylene glycol	1	-	-	-	5	-	5	1	-	1	-	2
Water, Preservative, and Buffer	balance to 100 %											

[1] ethylene glycol distearate (at least 90% diester), available from Henkel KGaA, Düsseldorf, FRG ("HENKEL")

[2] coconut oil fatty acid monoethanolamide (about 95% amide) (HENKEL); the composition of the fatty acid is about 56% lauric acid, about 21% myristic acid, about 10% palmitic acid; and about 13% stearic acid and oleic acids

[3] C_{12-14} fatty alcohol + 4 ethylene oxide (HENKEL)

[4] aqueous solution of a fatty acid amide derivative of betaine structure having the formula $R\text{-}CONH\text{-}(CH_2)_3\text{-}N^+(CH_3)_2\text{-}CH_2\text{-}COO^-$, CTFA name cocamidopropyl betaine (about 30% active substance, about 5% NaCl) (HENKEL)

[5] C_{12-14} fatty alcohol adducted with an average of 3 moles of ethylene oxide per mole of alcohol (HENKEL)

[6] 86% in water

trade mark names.

The quantities of components A, B, and C specified in Table 1 were heated to a temperature of 75°C. Water heated to 75°C was added to this melt. The dispersion was then cooled with continuous stirring to 25°C, the preservative being added at a temperature of 30°C.

Comparison Example composition mixtures C9, C10, and C11 were also prepared. Except for the absence of component C, each comparison mixture Cx had the same composition as the corresponding composition x. The viscosities of some of the pearlescent concentrates according to the Examples and the Comparison Examples were measured with a Brookfield RVF Viscosimeter, spindle 5, at 10 revolutions per minute, at the particular temperature at which the mixture had been stored. The storage temperatures and measured viscosity values (in millipascal seconds) are shown in Table 2. The results show a definite reduction in viscosity from the addition of alcohol.

Application Examples

(See footnotes after last example.)

A1) Shampoo containing anionic surfactants

Component	% by weight
Fatty alcohol (C_{12-14}) polyglycol (2 EO) ether sulfate, sodium salt, about 30% in water (CTFA name: sodium laureth sulfate)	40.0
N-coconut acylamidopropyl dimethyl glycine, 30% in water (CTFA name: cocamidopropyl betaine)	10.0
Cetiol® HE[7]	2.0
Pearlescent concentrate Example 9	3.0
Sodium chloride	0.8
Water	balance

Table 2: Viscosity Values

Mixture No.	Temperature, °C	Storage time, days	Viscosity, mPa.s
2	10	1	14400
2	25	1	6000
2	40	1	14000
7	10	1	14000
7	25	1	5600
7	40	1	8000
9 C9	10	14	14000
	10	14	22000
9 C9	25	1	6000
	25	1	11200
9 C9	25	7	5200
	25	7	12000
9 C9	25	14	5200
	25	14	12000
9 C9	40	14	14000
	40	14	20000
10 C10	10	14	16000
	10	14	22000
10 C10	25	1	6000
	25	1	11200
10 C10	25	7	6000
	25	7	12000
10 C10	25	14	6400
	25	14	12000
10 C10	40	14	13600
	40	14	20000

A2) Foam bath containing anionic surfactants

Component	% by weight
Fatty alcohol (C_{12-14}) sulfate, magnesium salt, about 30% in water (CTFA name: Magnesium lauryl sulfate)	40.0
N-coconut acylamidopropyl dimethyl glycine, 30% in water (CTFA name: cocamidopropyl betaine)	10.0
Sulfosuccinic acid monolauryl polyglycol (3 EO) ester, 40% in water (CTFA name: disodium laureth sulfosuccinate)	4.5
Cetiol® HE[7]	2.0
Pearlescent concentrate Example 7	3.0
Sodium chloride	0.3
Water	balance

A3) Hair treatment containing cationic surfactants

Component	% by weight
Quaternium® 52[8]	2.0
Cetiol® HE[7]	0.5
Viscontran® HEC 30000 PR[9]	50.0
Pearlescent concentrate Example 2	5.0
Citric acid	0.2
Water	balance

Notes for the Application Examples

[7] Polyol fatty acid ester (CTFA name: PEG-7-Glyceryl Cocoate) (HENKEL)

[8] Tris-(oligooxyethyl)-alkyl ammonium phosphate, 50% in water (HENKEL)

[9] Hydroxyethyl cellulose, 2% in water (AQUALON)

THE EMBODIMENTS OF THE INVENTION IN WHICH AN EXCLUSIVE PROPERTY OR PRIVILEGE IS CLAIMED ARE DEFINED AS FOLLOWS:

1. A free-flowing aqueous dispersion, comprising:
   (A) 15 to 40% by weight of pearlescing components;
   (B) 5 to 55% by weight of emulsifiers selected from nonionic, ampholytic, and zwitterionic surfactants; and
   (C) 0.1 to 5% by weight of low molecular weight, polyhydric alcohols.

2. A dispersion as claimed in claim 1, comprising from 20 to 30% by weight of component (A), from 15 to 30% by weight of component (B), and from 0.5 to 3% by weight of component (C).

3. A dispersion as claimed in claim 2, wherein the pearlescing components are selected from the group consisting of:

(A1) esters corresponding to formula (I):

$$R^1 - (OC_nH_{2n})_x - OR^2 \qquad (I),$$

in which R^1 is a linear C_{14-22} fatty acyl group, R^2 is hydrogen or is selected from the same group as R^1, n = 2 or 3, and x is a number from 1 to 4;

(A2) monoalkanolamides corresponding to general formula (II):

$$R^3 - CO - NH - X \qquad (II),$$

in which R^3 is an alkyl group containing 8 to 18 carbon atoms and X is a group $-CH_2-CH_2-OH$, a group $-CH_2-CH_2-CH_2-OH$, or a group $-C(CH_3)_2-OH$;

(A3) linear, saturated C_{16-22} fatty acids; and

(A4) β-ketosulfones corresponding to general formula (III):

$$R^4 - CO - \underset{\displaystyle R^5}{\underset{|}{CH}} - SO_2 - CH_2 - R^6 \qquad (III),$$

in which R^4 is a C_{11-21} alkyl or alkenyl group, and either each of R^5 and R^6 represents a hydrogen atom or R^5 and R^6 together represent an ethylene group so that the moiety

$$- \underset{\displaystyle R^5}{\underset{|}{CH}} - SO_2 - CH_2 - R^6$$

represents a tetrahydrothiophene dioxide derivative.

4. A dispersion as claimed in claim 1, wherein the pearlescing components are selected from the group consisting of:

(A1) esters corresponding to formula (I):

$$R^1 - (OC_nH_{2n})_x - OR^2 \quad (I),$$

in which R^1 is a linear C_{14-22} fatty acyl group, R^2 is hydrogen or is selected from the same group as R^1, n = 2 or 3, and x is a number from 1 to 4;

(A2) monoalkanolamides corresponding to general formula (II):

$$R^3 - CO - NH - X \quad (II),$$

in which R^3 is an alkyl group containing 8 to 22 carbon atoms and X is a group $-CH_2-CH_2-OH$, a group $-CH_2-CH_2-CH_2-OH$, or a group $-C(CH_3)_2-OH$;

(A3) linear, saturated C_{16-22} fatty acids; and

(A4) β-ketosulfones corresponding to general formula (III):

$$R^4 - CO - \underset{\displaystyle R^5}{\underset{|}{CH}} - SO_2 - CH_2 - R^6 \quad (III),$$

in which R^6 is a C_{11-21} alkyl or alkenyl group, and either each of R^5 and R^6 represents a hydrogen atom or R^5 and R^6 together represent an ethylene group so that the moiety

$$- \underset{\displaystyle R^5}{\underset{|}{CH}} - SO_2 - CH_2 - R^6$$

represents a tetrahydrothiophene dioxide derivative.

5. A dispersion as claimed in claim 4, wherein at least 70% by weight of the pearlescing component (A) consists of ethylene glycol distearate.

6. A dispersion as claimed in claim 3, wherein at least 90% by weight of the pearlescing component (A) consists of ethylene glycol distearate.

7. A dispersion as claimed in claim 6, comprising as emulsifiers nonionic surfactants selected from the group consisting of:

(B1) adducts of an average of from 2 to 30 moles of ethylene oxide and/or an average of 0 to 5 moles of propylene oxide with each mole of linear C_{8-22} fatty alcohols, C_{12-22} fatty acids, and/or alkyl phenols containing 8 to 15 carbon atoms in the alkyl group, the total moles of ethylene oxide and propylene oxide combined averaging not less than two per mole of lipophilic group containing alcohol, acid, or alkyl phenol;

(B2) C_{12-18} fatty acid monoesters and diesters of adducts of an average of from 1 to 30 moles of ethylene oxide with each mole of glycerol;

(B3) glycerol monoesters and diesters and sorbitan monoesters and diesters of saturated and unsaturated C_{8-18} fatty acids and of acids that are adducts of from 1 to 30 moles of ethylene oxide with each mole of saturated and unsaturated C_{8-18} fatty acids;

(B4) C_{8-18} alkyl mono- and oligo-glycosides and oligo(oxyethylene) homologs thereof; and

(B5) adducts of an average of from 10 to 60 moles of ethylene oxide with each mole of castor oil or hydrogenated castor oil.

8. A dispersion as claimed in claim 5, comprising as emulsifiers nonionic surfactants selected from the group consisting of:

(B1) adducts of an average of from 2 to 30 moles of ethylene oxide and/or an average of 0 to 5 moles of propylene oxide with each mole of linear C_{8-22} fatty alcohols, C_{12-22} fatty acids, and/or alkyl phenols containing 8 to 15 carbon atoms in the alkyl group, the total moles of ethylene oxide and propylene oxide combined averaging not less than two per mole of lipophilic group containing alcohol, acid, or alkyl phenol;

(B2) C_{12-18} fatty acid monoesters and diesters of adducts of an average of from 1 to 30 moles of ethylene oxide with each mole of glycerol;

(B3) glycerol monoesters and diesters and sorbitan monoesters and diesters of saturated and unsaturated C_{8-18} fatty acids and of acids that are adducts of from 1 to 30 moles of ethylene oxide with each mole of saturated and unsaturated C_{8-18} fatty acids;

(B4) C_{8-18} alkyl mono- and oligo-glycosides and oligo(oxyethylene) homologs thereof; and

(B5) adducts of an average of from 10 to 60 moles of ethylene oxide with each mole of castor oil or hydrogenated castor oil.

9. A dispersion as claimed in claim 4, comprising as emulsifiers nonionic surfactants selected from the group consisting of:

(B1) adducts of an average of from 2 to 30 moles of ethylene oxide and/or an average of 0 to 5 moles of propylene oxide with each mole of linear C_{8-22} fatty alcohols, C_{12-22} fatty acids, and/or alkyl phenols containing 8 to 15 carbon atoms in the alkyl group, the total moles of ethylene oxide and propylene oxide combined averaging not less than two per mole of lipophilic group containing alcohol, acid, or alkyl phenol;

(B2) C_{12-18} fatty acid monoesters and diesters of adducts of an average of from 1 to 30 moles of ethylene oxide with each mole of glycerol;

(B3) glycerol monoesters and diesters and sorbitan monoesters and diesters of saturated and unsaturated C_{8-18} fatty acids and of acids that are adducts of from 1 to 30 moles of ethylene oxide with each mole of saturated and unsaturated C_{8-18} fatty acids;

(B4) C_{8-18} alkyl mono- and oligo-glycosides and oligo(oxyethylene) homologs thereof; and

(B5) adducts of an average of from 10 to 60 moles of ethylene oxide with each mole of castor oil or hydrogenated castor oil.